TELEFAX TRANSMITTAL SHEET

DATE: April 25, 1989

FROM: STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Person transmitting: George Dews

DEP Unit: Hazardous Waste Management Section

Phone Number: (203) 566- 2264

DEP Fax Number: (203) 566-8650

Transmittal To: Stephen Yee
CT Waste Regulation Section
U.S. EPA - Region I
JFK Fedeal Building - (CAN-HER 6)
Boston, MA 02203
at Fax Number: (617) 573-9662

Total Number of Pages, including this page: 16

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STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

April 24, 1989

Mr. Stephen Yee
Connecticut Waste Regulation Section
U.S. EPA - Region I
J.F.K. Federal Building - CAN-HER6
Boston, Massachusetts 02203

RE: Comments on May 2, 1988 Closure Plan for the Burn-Zol Hazardous Waste Incinerator Located at the Main Street, East Hartford Facility.
EPA ID No. CTD 990672081

Dear Mr. Yee:

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All decontaminated incinerator train parts and structures (concrete pad) to be reused must be verified to contain no hazardous waste constituents above risk based standards for all exposure pathways. The exposure pathways of concern are groundwater and direct ingestion.

Provide target clean criteria for each hazardous waste constituent of concern for each exposure pathway.

Sincerely,

George Dews
Senior Sanitary Engineer
Hazardous Waste Management Section

GD:et

Phone:
165 Capitol Avenue • Hartford, Connecticut 06106

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

John G. Whitehead, Plant Manager
United Technologies Pratt & Whitney
400 Main Street
East Hartford, CT 06108

RE: Comments on the May 2, 1988 Closure Plan for the Burn-Zol Hazardous Waste Incinerator Located at the Main Street, East Hartford Facility.
EPA ID No. CTD 990672081

Dear Mr. Whitehead:

As a result of the review of your resubmitted incinerator closure plan dated May 2, 1988, we offer the following comments:

1. In section 1.0, INTRODUCTION:

   a. The closure plan should describe the real potential hazards to personal health and safety as well as the environment. The descriptions that are provided in the submitted closure plan are general in detail and do not adequately address the steps involved in the closure and its impact to human health and the environment.

   b. Paragraph 1. - Under Item #2, revise the wording to read: Control, minimize or eliminate to the extent necessary to protect human health and the environment, the post closure escape of hazardous waste, hazardous constituents, leachate, or contaminated run-off to the ground water, surface water or the atmosphere.

   c. Paragraph 2. - Omit the word "general" in: "...provides a description of general methods to ..."

   d. Under <u>Personal Health and Safety</u>:

      1. Explain and provide scenarios of how the determination for adequate clothing and the use of self-contained breathing apparatus will be made.

e. Under Sudden or Non-Sudden Release or Fire Hazard:

1. What activities are included in the "decontamination process"? Should this be reworded from "decontamination process" to "closure activities" ?

2. Explain why you are considering this process to have a potential for fire or explosion.

3. Describe what the "appropriate mechanisms of the contingency plan" are. The "appropriate mechanisms" should be defined.

f. Paragraph 3. - This information describing previous submissions of closure plans can be included in a cover letter, but should not be in the closure plan. When a closure plan is submitted to the EPA/CT DEP, it should be assumed that it is a final product, complete for public notice, without any mention of previous revisions. The entire paragraph should be omitted.

2. In section 2.0, FACILITY DESCRIPTION:

a. Paragraph 3. - Rewrite the first sentence without using the wording "...this unit has never been used to treat any hazardous wastes."

3. In section 3.0, INCINERATOR DESCRIPTION:

a. Paragraph 1. - Provide a clear definition of what is considered to be the "incinerator train."

b. Paragraph 2. - The height is stated as 21' 3" in the closure plan and in your Part B permit application, however, Appendix A (of the closure plan) indicates a height of 21' 5".

c. Paragraph 5.

1. Omit the word "also" in the second sentence.

2. Define and depict in detail what portions of the incinerator system/train are located inside and outside of the building.

d. Paragraph 6. - Define what the "B&G tube" is.

e. Paragraph 9.

1. Capitalize the first word of the first sentence.

2. Although the system operated under negative pressure because of an induced draft, there is still the possibility of contamination along the exhaust ducting because of down drafts and other operational problems. Wipe tests should be done on the outside of the duct work, especially at joints and anywhere visual discoloration is detected, to an extent that sufficiently demonstrates that there is no contamination.

   A useful reference, as stated in our January 29, 1988 comment letter to you, is "A Guide for Decontaminating Building Structures and Equipment at Superfund Sites," EPA No. 85/201234.

4. In section 5.0, TEST BURN HISTORY:

   a. Please rewrite this section to include the quantities of each waste burned and the feed rate for each set of trial burns as well as some expansion of the explanation as to why the equipment was modified after each set of trial burns.

   b. Paragraph 5. - "Appendix A" should read "Appendix B".

5. In section 6.0, CLOSURE PROCEDURES AND SCHEDULE:

   a. Paragraph 1.

      1. First sentence. "..incinerator portion.." should read "..incinerator train portion..".

      2. It should be clearly stated which pieces/portions of the system or incinerator train will be removed as well as which pieces/portions will remain at the facility.

      3. For the pieces of the system that will remain at the facility, provide an explanation of its present and future use(s). Also, discuss under Section 10.0, Testing and Determination Procedures, how the remaining pieces of the system will be decontaminated in a manner that will ensure that no hazardous waste remains.

      4. Second sentence. Include that the building is currently used for other hazardous waste activities, not just future use(s).

5. It should be stated that revisions to the Part B Permit Application will be submitted within sixty (60) days prior to the start of closure activities (in accordance with 40 CFR Part 265.112(c)(2)).

b. Paragraph 2. The incinerator train was earlier defined to include the incinerator and associated equipment. It should, therefore, be stated that all hazardous wastes will be removed from the incinerator train as described.

c. Paragraph 3. First sentence. "... during the closure." should read, " ...during closure activities.".

d. Paragraph 5.

1. "The closure process concerns only the incinerator, waste heat boiler, and associated air pollution control equipment, and the disposal of any hazardous wastes or hazardous waste residues." should read: "The closure process concerns only the incinerator train and the disposal of hazardous wastes or hazardous waste residues".

2. Subparagraph 1.

a. In section 7.0, HAZARDOUS WASTE INVENTORY, it is stated that through visual inspection, it has been determined that there is not observable quantities of ash in the primary combustion chamber of the incinerator. If this is the case, then a shovel would appear to be inappropriate for removing such small quantities of ash or residues. It is further stated that any ash or residue will be wetted for dust control and if a shovel is not used then another "such appropriate and similar tool" shall be. Describe this other "appropriate and similar tool".

b. In addition, how will tools, protective clothing, and any other items be decontaminated or handled after their use?

3. Subparagraph 2.

a. Identify the "appropriate solvent" that will be used to flush the waste feed lines and describe the basis for its selection.

b. State that all rinsate (for the cyanide feed line) prior to the process water rinse that is found to be nonhazardous will be handled as a hazardous waste.

c. "...process water flush if determined..." should read "...process water flush is determined...".

d. Identify the bio-degradable degreaser and surfactant that will be used and explain why it was selected.

e. The lines and types of wastes they carried needs to be clarified. A waste oil and solvent line is mentioned in this section which appears to contradict what is described in section 5.0, TEST BURN HISTORY, (last paragraph). In section 5.0, the different types of wastes are listed and described as having different lines (or at least nozzles). This information should be clearly described in the closure plan.

f. State that all rinsate (for the waste oil and solvent line) prior to the nonhazardous determination will be handled as a hazardous waste.

g. "...the lines cut off" should read "...the lines will be cut off".

4. Subparagraph 3.

a. "Disassemble the incinerator, waste heat boiler, ..." should read "Disassemble the incinerator train which includes the incinerator, waste heat boiler, ...".

b. Explain by what means and methods, the various portions of the incinerator train will dismantled.

c. State again that any incinerator ash will be wetted for dust control or the method(s) that will be used.

d. Identify the transporter that will be used to transport the dismantled pieces from the point of disassembly to its final disposal. If one has not been identified, provide a schedule as to when one will be named.

e. Identify the landfill that the incinerator train, ash, and residue will be disposed in. If one has not been identified, provide a schedule as to one that will be selected.

f. Explain how will large and heavy pieces be handled from the facility to the final disposal site (i.e., The refractory brick will be left in place, the prevention of fugitive emissions, etc.). Also, explain how the handling and transport equipment that is used in the dismantling and transport operations will be decontaminated.

5. Subparagraph 4.

a. How will the residue from the sandblasting and steam cleaning operations be contained and collected? Also, provide procedures on how any fugitive emissions or run-offs will be controlled.

b. What type of safety clothing will used during these operations?

c. Are there any other areas that housed or could have been exposed to incineration operations besides the concrete pad and the pit that contains the air pollution equipment control equipment?

d. For the concrete pad that formerly was used as the footing and the pit that formerly contained the air pollution equipment, describe the activities that have taken place such as: what was removed, what precaution were taken, etc.

6. Subparagraph 5. It must be stated that certification of closure will be sent by registered mail to the EPA Regional Administrator within 60 days after closure is complete pursuant to 40 CFR Part 265.120 (this comment also appears in section 11.0, CERTIFICATION OF CLOSURE) as well as the Commissioner of the Connecticut Department of Environmental Protection.

7. Subparagraph 6.

a. The Part B application must be completed within 60 days prior to commencement of

closure activities pursuant to 40 CFR Part 265.112(c)(2) (this comment also appears in section 6.0, CLOSURE ACTIVITIES AND SCHEDULES).

b. Change "structure" to "facility".

c. Table 1 should be stated in days.

d. Expected year of closure should be stated pursuant to 40 CFR Part 265.112(b)(7).

8. First paragraph after Table 1, second sentence. It should be stated that all closure activities outlined in this closure plan will be completed within 180 days after receiving final approval from EPA/CT DEP pursuant to 40 CFR Part 265.113(b).

6. In section 7.0, MAXIMUM WASTE INVENTORY:

a. "...will be handled appropriately." should read "...will be handled as described in Section 6.0."

b. Include results of scrubber water testing in an appendix.

c. Omit last sentence.

7. In section 8.0, CLOSURE COST ESTIMATE AND UPDATES:

a. Please revise and update the closure steps as well as their related closure costs. Pages 9 and 10 should be completely revised.

b. The cost estimates should be revised to present value amounts. Inflation factors are not needed. Please refer to EPA Guidance Manual: Cost Estimates for Closure and Post-Closure Plans (Subparts G and H) Volume 3 - Unit Costs. EPA number 530-SW-87-009.

c. There is no need to mention ".. for this submission.." You can simply state the steps needed to complete closure as presented in this closure plan.

d. Further clarification and itemization is needed in each step. Include costs associated with:

1. testing (# samples)
2. flushing fluids

3. equipment needed
4. labor (# men, # days)
5. estimated quantities of materials for disposal
6. contingency costs (for the entire plan)

8. In section 9.0, SAMPLING PROCEDURES:

a. It should be stated that the third edition of SW-846 will be used (September 1986).

b. The quality control as described is inadequate. Please refer to SW-846, referenced above, for the proper quality control information.

c. Identify the laboratory that will be doing the analysis during the closure process.

The chip tests of the concrete pad will be required, pursuant to 40 CFR 265.351, to demonstrate that no contamination remains in the pad. Areas that are visually stained should be sampled and analyzed separately but not composited. Procedures for the disposal of the concrete pad (with cost estimates) should be included in the plan in event the sampling results show contamination.

e. Wipe tests should be done to assure that there is no contamination on the outside of the duct work or any area where it was expose to hazardous waste. Also, see comments in section 3.0, INCINERATOR DESCRIPTION.

9. In section 10.0, TESTING AND DETERMINATION PROCEDURES:

a. It is stated that all wastes, residues, and rinsates will be analyzed for the parameters in Table 3 and that concentrations found above the hazardous levels given will be considered a hazardous waste. However, section 6.0 describes all wastes and residues as being treated as hazardous wastes; only the rinsates are described as being tested for hazardous constituents.

b. The proposed list of parameters is inadequate. EPA usually requests a complete Appendix IX[1] analysis for a hazardous constituent determination pursuant to 40 CFR Part 265.111. You should be aware, however, that an Appendix VIII[2] analysis is often accepted as an adequate substitute. If appropriate documentation can demonstrate that previous analyses of your waste solvent mixture consistently indicated the absence of certain constituents then it is p[illegible]ble that those

constituents may be eliminated. (These analyses would have to had been performed in the same time period as the incinerator test burns unless you can further demonstrate that there have been no changes in processes that effect the solvent waste stream).

c. Method 6010 is an analytical method, not an extraction method as indicated in Table 3. Mercury is specifically excluded as a parameter in method 6010. Refer to SW-846 for proper methods.

d. The analytical method from SW-846 that will be used to do the analysis should be stated. The listing of several methods for each parameter is inappropriate.

e. Reference should be made that quality controls as specified in SW-846 will be followed by the chosen laboratory.

f. Identify the laboratory that will be doing the analyses.

10. In section 11.0, CERTIFICATION OF CLOSURE:

a. The certification statement must be sent to the EPA Regional Administrator by registered mail within 60 days after completion of closure pursuant to 40 CFR Part 265.120.

*1 Appendix IX is found in the July 9, 1987 Federal Register, Volume 52, Number 131, pages 25942-25953.

*2 40 CFR Part 261 Appendix VIII

constituents may be eliminated. (These analyses would have to had been performed in the same time period as the incinerator test burns unless you can further demonstrate that there have been no changes in processes that effect the solvent waste stream).

c. Method 6010 is an analytical method, not an extraction method as indicated in Table 3. Mercury is specifically excluded as a parameter in method 6010. Refer to SW-846 for proper methods.

d. The analytical method from SW-846 that will be used to do the analysis should be stated. The listing of several methods for each parameter is inappropriate.

e. Reference should be made that quality controls as specified in SW-846 will be followed by the chosen laboratory.

f. Identify the laboratory that will be doing the analyses.

*1 Appendix IX is found in the July 9, 1987 Federal Register, Volume 52, Number 131, pages 25942-25953.

*2 40 CFR Part 261, Appendix VIII.

10. In section 11.0, CERTIFICATION OF CLOSURE:

a. The certification statement must be sent to the EPA Regional Administrator by registered mail within 60 days after completion of closure pursuant to 40 CFR Part 265.120.

The modifications to the closure plan required by the above comments should be completed and resubmitted within twenty-one (21) days of the receipt of this letter.

If you have any questions in regards to this letter, please contact us.

Sincerely,

Stephen Yee,
Environmental Engineer
Waste Management Division
Environmental Protection
Agency
(617) 573-9644

George Dews,
Senior Sanitary Engineer
Hazardous Waste Management Unit
Connecticut Department of
Environmental Protection
(203) 566-2264

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

January 29, 1988

Mr. John G. Whitehead, Plant Manager
United Technologies Pratt & Whitney
400 Main Street
East Hartford, CT 06108

Re: Comments on the Revised Burn-Zol Hazardous Waste Incinerator Closure Plan, United Technologies Pratt & Whitney East Hartford, Connecticut CTD990672081

Dear Mr. Whitehead:

As a result of the review of your resubmitted incinerator closure plan, dated January 16, 1987, we offer the following comments:

° Your Part B Permit application indicates that some of the wastes incinerated were listed (identified in 40 CFR Part 261, Subpart D). The current plan only addresses the waste as characteristic (40 CFR Part 261, Subpart C). This distinction is important when determining whether the refractory brick and other parts of the incinerator can be disposed of as non-hazardous waste.

The mixture rule (40 CFR 261.3(c)) specifies that any hazardous waste mixed with a solid waste results in the mixture being considered a hazardous waste unless the mixture no longer exhibits any hazardous waste characteristics and the hazardous waste in the mixture was only characteristically hazardous.

All residues pursuant to 40 CFR 265.351, such as refractory brick removed and intended for disposal, are considered solid waste. When in place, the refractory brick was exposed to hazardous waste[1], both of a characteristic and listed

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[1] EPA recognizes an incinerator as a treatment system and the effluent flow if it meets the DRE and other parameters specified by license as non-hazardous waste. The incinerator train through the final treatment process (i.e., scrubber) is exposed to hazardous waste. In this case, the effluent did not meet specified destruction/removal standards and, therefore, the stack is also considered to have been exposed to hazardous waste.

nature. Consequently, a determination of "non-hazardousness" of the refractory requires that:

1) A demonstration of total absence of any listed hazardous waste (and 40 CFR Part 261, Appendix VII "Hazardous constituents for which listed") and a level of hazardous waste characteristic properties below those specified in §261, Subpart C be made;

2) A demonstration that levels of listed hazardous waste (and Hazardous constituents) and levels of characteristic hazardous waste properties present existed in the "virgin" refractory be made; or

3) The refractory is delisted as specified in 40 CFR Part 260.22. This is a formal procedure that is conducted through the Office of Solid Waste at EPA in Washington, D.C., and the Connecticut Department of Environmental Protection.

- The proposed analytical activities are not sufficient. The analysis, as stated above requires at a minimum that you determine whether either characteristic or listed hazardous wastes are present. The listed hazardous waste evaluation must include analyses for the Part §261, Appendix VII constituents.

- Scrape samples of refractory brick only allow you to analyze for surface and near surface contamination. EPA believes that it is more appropriate to take core samples of the refractory for analysis.

- The utilization of a wipe test in determining that the exposed and uncovered metal surfaces are not contaminated, is not sufficiently explained in the plan. A useful reference would be the "Guide for Decontaminating Building Structures and Equipment at Superfund Sites" (EPA publication PB 85/201234 by HWERL) which may provide the necessary detail for describing a comprehensive wipe test protocol.

- All structures which remain within the facility which housed the incinerator must be decontaminated to the extent necessary to protect human health and the environment from post-closure escape of hazardous waste, hazardous constituents, contaminated run-off or hazardous waste decomposition products. To meet this standard the contaminant concentrations must be reduced to a a risk based level which considers each contaminant pathway (such as inhalation, dermal absorption and ingestion) for all hazardous constituents. Please note that the 40 CFR 264, Appendix IX constituent list is an acceptable alternative to §261, Appendix VIII when making that demonstration.

In addition to the above comments, there were some comments discussed with Mr. K. Vidmar by phone on March 15, 1987. These comments are listed below:

- There need to be two separate sets of wipe tests for the analysis that was proposed in the revised closure plan, one

set for CN and another set for metals. There will likely be additional wipe samples necessary to address the listed nature of the wastes used.

- There is no description of the decontamination activities for the equipment attached to the incinerator train such as blowers and burners. Will they be steam cleaned and tested? In addition, there are access doors that are apparently lined with refractory and are sealed with asbestos gaskets. What decontamination activities will be undertaken for these portions of the incineration system?

- Mr. Vidmar indicated that the incinerator will be disassembled, then sampled and decontaminated. This information should be included in the plan. In addition, the plan should include a description of the steps taken to prevent contamination and effect clean-up of the location where incinerator disassembly will occur.

- Disposal of the condensate from the steam cleaning operations and water used to flush the waste injection lines as non-hazardous waste require the same analysis for charactistics and Part 261 Appendix VII hazardous constituents as the other wastes generated during closure.

- This closure plan appears to constitute a partial closure plan for the CWTP and that fact should be stated in the plan. This will preclude any questions about why the surrounding area is not being addressed in this plan.

- When removal of ash and the refractory occurs we recommend some dust suppression technique be employed (such as wetting the ash down) and the chosen technique be written into the closure plan.

- Please describe the composite analysis strategy more fully for the refractory samples (i.e., which samples were/will be in which composites).

- If any additional samples of stained refractory are taken, they should be analyzed individually, to ensure that those areas which may be contaminated are not diluted through the analysis of sample compositing.

- Although the unit was operated at a negative pressure, and for a short period of time, EPA recommends that Pratt demonstrate that the outside of the unit is not contaminated. This could be accomplished by analyzing the shell through the use of wipe tests in various locations. A more definitive statement could then be made on page 8 of 13 of the closure plan.

The modifications to the plan required by the above comments should be completed and resubmitted for review and public notice

within a period of forty-five (45) days of receipt of this letter.

If you have any questions about the above comments please contact us.

Sincerely,

Arthur Wing,
Environmental Engineer
Waste Management Division
(617) 573-9683

George Dews,
Senior Sanitary Engineer
Hazardous Materials Management Unit
(203) 566-2264

cc: J. Murray